8. Hannah

Program Name: Hannah.java   **Input File: hannah.dat**

Hannah is practicing her programming skills for the upcoming UIL Computer Science contest season. She heard that the State contest experience is very challenging and wants to be prepared. Her coach explained how the overall state scores are grouped by classifications (1A, 2A, 3A, 4A, 5A, 6A) and are a combination of both programming and the written test. Each contest team consists of 3 students that take the written test with 40 questions which has a max score of 240 but could be negative when students answer too many questions incorrectly; there is no penalty for unanswered questions. The max team score for the written test is 720, or 3 scores of 240 points. The programming component of the contest consists of 12 problems worth a max of 60 points each but submissions that are not correct reduces the problem's max score by 5 points for each bad submission. The team programming score is another 720 points, or 12 programs of 60 points. The overall team score is simply the sum of the written and programming scores.

The following table is a sample of the programming data.

Prog Scores	Class	Prob 1	Prob 2	Prob 3	Prob 4	Prob 5	Prob 6	Prob 7	Prob 8	Prob 9	Prob 10	Prob 11	Prob 12
Team 1	2A	55	60	50	60	60	60	60	60	60	60	0	60
Team 2	5A	60	60	60	60	60	55	60	60	50	0	60	55
Team 3	6A	60	50	60	55	60	60	60	60	0	60	60	45

The following table is a sample of the written test data.

Test Scores	Student 1	Student 2	Student 3
Team 1	200	210	184
Team 2	104	172	224
Team 3	86	164	196

Hannah has accepted a challenge of processing the raw scores to determine the top 3 teams in each classification. It is just summing the scores and finding the 3 top overall team scores in each classification. Ties are not common so we will ignore that possibility for this program. Can you handle her challenge?

Input: First line will contain an integer **T** with $1 \leq T \leq 10$, the number of test cases. Each test case will start with a positive integer **N** which is the total number of teams. The **N** following lines will each contain a school name with no spaces, a classification as shown above, and 12 integers in the range [0,60], all items whitespace-separated. Those lines are then followed by **N** more lines each containing a school name with no spaces and 3 integers in the range [−80,240], all whitespace -separated. Team names will be in the same order for both sets of scores but classification levels may vary in order. There is guaranteed to be 1 or more teams for each classification and they must have 12 program scores and 3 written exam scores.

Output: Each test case will produce a list of the team names and scores in descending order for each classification, organized from 1A to 6A. Label and format the results as shown in the sample below. Display a single line following each test case containing 15 equal signs "===============".

Sample input:
```
2
15
Team_1 2A    60    40    30    60    55    50    30    30    55    35    50    0
Team_2 5A    35    50    30    45    50    50    30    60    50    50    0     30
Team_3 6A    35    30    45    45    30    35    30    40    30    0     40    50
Team_4 1A    30    40    0     55    0     30    35    55    40    55    30    60
Team_5 5A    40    55    30    45    55    45    40    0     35    60    40    55
```

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Team_6 4A    0    35   45   40   30   30   0    50   45   55   40   50
Team_7 6A    35   0    45   55   60   0    60   50   55   30   30   50
Team_8 1A    35   45   35   60   40   35   55   40   0    30   45   55
Team_9 6A    30   35   55   0    40   60   30   50   60   35   35   55
Team_10   4A 35   45   0    60   0    40   30   45   55   35   35   60
Team_11   3A 45   0    35   35   45   0    30   55   40   40   60   30
Team_12   5A 0    30   55   45   60   55   0    30   60   35   60   55
Team_13   3A 60   0    55   50   35   30   40   0    50   45   35   35
Team_14   5A 50   45   0    60   40   40   45   40   0    60   45   45
Team_15   2A 35   55   60   0    60   50   60   35   30   0    45   35
Team_1 184   155  70
Team_2 199   192  203
Team_3 136   177  229
Team_4 93    75   121
Team_5 0     210  228
Team_6 180   220  131
Team_7 174   92   235
Team_8 226   55   234
Team_9 92    196  163
Team_10   234  170  145
Team_11   136  178  185
Team_12   185  112  84
Team_13   68   -12  116
Team_14   230  121  146
Team_15   75   97   53
20
Team_1 2A    50   30   55   30   35   55   30   40   55   35   30   0
Team_2 5A    60   30   35   60   45   50   30   30   30   35   0    55
Team_3 6A    50   60   50   50   45   55   45   50   35   0    55   55
Team_4 1A    30   30   40   30   30   30   50   35   0    40   35   60
Team_5 5A    30   50   35   55   30   30   40   0    50   45   40   50
Team_6 4A    0    35   30   40   55   55   0    35   60   60   60   50
Team_7 6A    45   0    35   30   35   0    60   55   30   30   60   60
Team_8 1A    45   60   0    40   0    45   35   30   60   30   60   60
Team_9 2A    30   35   30   0    35   30   30   55   45   45   30   60
Team_10   4A 40   50   0    60   0    55   35   35   40   60   60   60
Team_11   3A 35   0    45   30   35   0    45   35   35   30   45   45
Team_12   5A 0    45   45   45   50   45   0    35   40   45   55   40
Team_13   3A 60   0    50   30   55   50   50   0    30   35   35   55
Team_14   5A 40   55   0    40   35   30   30   50   0    35   50   45
Team_15   2A 40   30   50   0    30   50   60   30   55   0    50   30
Team_16   4A 60   55   55   60   0    50   50   30   30   35   0    55
Team_17   3A 30   55   50   55   50   0    40   40   55   55   50   0
Team_18   6A 40   60   30   50   35   45   0    30   40   55   0    60
Team_19   5A 35   30   50   45   55   40   40   0    45   0    40   45
Team_20   6A 40   30   40   40   50   45   35   55   0    55   30   60
Team_1 98    222  156
Team_2 134   208  140
Team_3 215   128  62
Team_4 180   67   132
Team_5 0     206  210
Team_6 148   141  75
Team_7 218   202  174
Team_8 73    205  231
Team_9 112   103  187
Team_10   193  226  131
Team_11   59   138  193
Team_12   94   176  205
Team_13   210  -12  75
Team_14   231  133  200
Team_15   237  183  121
```

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```
Team_16      -2    113    196
Team_17     144     99    133
Team_18     168     56    226
Team_19      64     73     57
Team_20     195     93    235
```

Sample output:
```
Classification 1A Results
Team_8 990
Team_4 719
Classification 2A Results
Team_1 904
Team_15 690
Classification 3A Results
Team_11 914
Team_13 607
Classification 4A Results
Team_10 989
Team_6 951
Classification 5A Results
Team_2 1074
Team_14 967
Team_5 938
Team_12 866
Classification 6A Results
Team_7 971
Team_3 952
Team_9 936
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Classification 1A Results
Team_8 974
Team_4 789
Classification 2A Results
Team_15 966
Team_1 921
Team_9 827
Classification 3A Results
Team_17 856
Team_11 770
Team_13 723
Classification 4A Results
Team_10 1045
Team_6 844
Team_16 787
Classification 5A Results
Team_14 974
Team_2 942
Team_12 920
Team_5 871
Team_19 619
Classification 6A Results
Team_7 1034
Team_20 1003
Team_3 955
Team_18 895
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```